

Title (en)  
FUEL INJECTION VALVE

Title (de)  
BRENNSTOFFEINSPRITZVENTIL

Title (fr)  
INJECTEUR DE CARBURANT

Publication  
**EP 0934461 B1 20061018 (DE)**

Application  
**EP 98936192 A 19980617**

Priority  
• DE 9801648 W 19980617  
• DE 19736548 A 19970822

Abstract (en)  
[origin: DE19736548A1] A fuel injector has a valve element inside a shaped bore and with the injection end inside an outer cowl (32) which protrudes past the end of the injector and which assists with fuel/air mixing. The cowl is made from deep drawn metal and is held onto a cylindrical body section by inward facing tags (65) which grip the plastic moulded outer profile of the injector. No separate fasteners are required.

IPC 8 full level  
**F02M 69/04** (2006.01); **F02M 61/18** (2006.01)

CPC (source: EP KR US)  
**F02M 69/04** (2013.01 - KR); **F02M 69/047** (2013.01 - EP US)

Designated contracting state (EPC)  
DE ES FR GB IT

DOCDB simple family (publication)  
**DE 19736548 A1 19990225**; BR 9806192 A 19991116; CN 1104557 C 20030402; CN 1237226 A 19991201; DE 59813774 D1 20061130; EP 0934461 A1 19990811; EP 0934461 B1 20061018; JP 2001504912 A 20010410; KR 20000068809 A 20001125; TW 358857 B 19990521; US 6598809 B1 20030729; WO 9910650 A1 19990304

DOCDB simple family (application)  
**DE 19736548 A 19970822**; BR 9806192 A 19980617; CN 98801198 A 19980617; DE 59813774 T 19980617; DE 9801648 W 19980617; EP 98936192 A 19980617; JP 51374399 A 19980617; KR 19997003485 A 19990421; TW 87109933 A 19980620; US 28489299 A 19990712